loop haptic has at its end a knob or protuberance **110** somewhat similar to that shown in FIG. **8**A. The loop haptics extend into the periphery of the bag between the anterior remnant and the posterior capsule to fixate the haptics and prevent movement of the knobs through fibrosis-defined tunnels defined about the loops. FIGS. **13** and **14** illustrate respectively the correct manner for the loop haptic to be oriented to engage the bag periphery wherein a portion of the loop and the knob engage the bag periphery. FIG. **14** shows an undesirable disposition of the loop haptic and knob in the fibrosis which does not provide optimum and desirable engagement with the bag periphery.

FIG. **15** illustrates an embodiment which is similar to that of FIGS. **12** and **13** except that a plurality of knobs or protuberances **110**, similar to that of FIG. **8**A, are positioned in spaced relation along the loop haptics to provide improved fixation of the loop haptic in the peripheral cul-de-sac of the bag.

FIGS. **16** and **16**A show an embodiment having a haptic comprising two half disk-shaped members **112** from which extend a plurality of loop haptic portions **114**. The edge of the disk-shaped portions and the loops are adapted to fit in the peripheral portion of the bag between the capsular remnant and the posterior capsule to fixate the haptic.

FIGS. **17** and **17**A illustrate an embodiment which has a disk haptic portion **116** on which are mounted and from which extend a plurality of filament haptic portions **118** of generally arcuate configuration at the end of each of which is disposed a knob or protuberance **120**. The loop haptic portions and the knobs serve the purposes outlined relative to embodiments earlier described.

FIG. **18** is an embodiment having a disk haptic **124** wherein are integrally formed peripheral inclined prong portions **126** extending somewhat tangentially with knobs at the ends thereof adapted to fit within the periphery of the bag between the anterior capsular remnant and the posterior bag for engagement with the periphery for the formation of fibrosis thereabout for the purposes earlier described.

FIG. **19** is an embodiment having a disk haptic **130** on the periphery of which are disposed a plurality of knobs **132**, such as the knobs of FIG. **28**, to serve the purposes earlier described in relation to other embodiments.

FIG. **20** is an embodiment having a disk haptic **134** with a plurality of circular openings **136** defined in its distal peripheral portion, the haptic periphery and these openings become engaged with fibrosis to serve the purposes earlier described.

FIG. **21** shows an embodiment similar to that of FIG. **20**, with slot-shaped openings **138** defined in disk haptic **140**.

FIG. **22** is somewhat similar to the embodiments of FIGS. **19** and **21**, and has slot-shaped openings **138** interspersed with knobs **140** in its disk peripheral edge portion.

FIG. **23** shows an embodiment wherein disk haptic portions **141** extend outwardly from an optic, and extending from their distal edge portions are a plurality of flexible loop haptic elements **143** with protuberances **145** thereon for engagement in the peripheral edge portion of the capsular bag for fixation of the haptic and centration of the optic.

FIGS. **24** and **25** show embodiments each having four plate haptics **142** extending from and equispaced about an optic **144**, and having defined in their peripheral portions slot-shaped openings **145**, the haptic edge portion and the openings being extensible in the bag periphery for purposes earlier described; the embodiment of FIG. **25** has similarly equispaced haptics extending from an optic **148**, each haptic having a plurality of knobs like those of FIG. **29** on its peripheral portion, the knobs and haptic edge portions serving the purposes earlier described.

The FIG. **26** embodiment is similar to the embodiment of FIGS. **24** and **25**, with an optic **150** having four equispaced haptics **152** extending therefrom, each having slot-shaped openings **154** therein and a knob **156** thereon.

FIGS. **27** and **28** illustrate embodiments wherein plate-type haptics extend oppositely from optic **160** in FIG. **27**, and from optic **162** in FIG. **28**, the FIG. **27** embodiment having a haptic with slot-shaped openings **164** in its distal portion, and the haptics (lower one not shown) of FIG. **28** having a plurality of knobs **166** in its peripheral portion, the slots and the knobs serving the purposes earlier described.

FIG. **29** is a partial sectional view taken at line **29**—**29** in FIG. **28**, and

FIG. **30** is a partial sectional view taken at line **30**—**30** in FIG. **27**.

Thus there have been shown and described novel intraocular lenses with fixated haptics which fulfill all the objects and advantages sought therefor. Many changes, modifications, variations and other uses and applications of the subject invention will, however, become apparent to those skilled in the art after considering this specification together with the accompanying drawings and claims. All such changes, modifications, variations and other uses and applications which do not depart from the spirit and scope of the invention are deemed to be covered by the invention which is limited only by the claims which follow.

What is claimed is:

1. An intraocular lens for implanting within a natural capsular bag of a human eye, said lens implant comprising:

a lens body having anterior and posterior sides and including an optic and two or more plate haptics spaced about said optic, said haptics having inner ends adjacent said optic and outer ends extending from said optic;

a plurality of protuberances extending outwardly from at least one of the anterior and/or posterior sides of one or more of said haptics to fixate said haptic in a natural capsular bag of an eye; and

at least one of said haptics has a plurality of openings formed therethrough to allow fibrosis of an anterior capsule remnant to a posterior capsule remnant through said haptic outer end opening following implantation of said lens into a natural capsular bag of an eye.

2. An intraocular lens for implanting within a natural capsular bag of a human eye, said lens implant comprising:

a lens body having anterior and posterior sides and including an optic and haptics spaced about said optic, said haptics having inner ends adjacent said optic and outer ends extending from said optic;

said haptics comprise a plurality of four plate haptics, wherein said haptic outer ends have a width greater than the width of said haptic inner ends; and

at least one of said haptics has a plurality of protuberances extending outwardly from at least one of the anterior and/or posterior sides of said at least one haptic to fixate said haptic in a natural capsular bag of an eye.

3. An intraocular lens for implanting within a natural capsular bag of a human eye, said lens implant comprising,

a lens body having anterior and posterior sides and including an optic and haptics spaced about said optic, said haptics having inner ends adjacent said optic and outer ends extending from said optic;